

Appl. No.: 09/322,283
Amdt. dated: November 21, 2005
Reply to Office action of May 20, 2005

REMARKS

Upon entry of the instant amendment, claims 12, 13, 14 and 18-21 are pending. Claim 15 has been cancelled. Claims 12 -14 have been amended to more particularly point out the applicant's invention. A Request for Continued Examination is included herewith. It is respectfully submitted that upon entry of the amendment and consideration of the remarks below, the application is condition for allowance.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

Claim 12 has been rejected under 35 USC § 103 (a) as being unpatentable over Jabr US Patent No. 6,229,632 ("the Jabr patent") in view of Piehler et al US Patent No. 5,940,196 ("the Piehler et al patent") or Roberts US Patent No. 6,252,692 ("the Roberts patent") or Franck et al US Patent No. 5,917,638 ("the Franck et al patent") and further in view of Rutledge US patent No. 5,864,625 ("the Rutledge patent"). The Applicant respectfully requests the Examiner to reconsider and withdraw this rejection for several reasons. First, the claims, as amended, now recite a control circuit for operating the bias of the optical modulator at a point where the power of the two wavelengths is relatively equal but different slopes. As stated in the specification, operating the optical modulator at such a bias point improves the sensitivity and linearity of the system. None of the patents cited either singly or in combination disclose or suggest an optical modulator which receives carrier signals of different wavelengths that is biased as recited in the claims. The only reference that really discusses biasing of a Mach Zehnder interferometer is the Franck et al patent which relates to a different configuration. In particular, the Franck et al patent discloses a dual input Mach Zehnder interferometer in which the input signals are modulated onto a single carrier at a single wavelength, identified in Fig. 10 with the reference numeral 54. Moreover, the Franck et al patent does not suggest or disclose that its biasing scheme is applicable to configurations in which the carrier has more than one wavelength. For these

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reasons and the reasons below, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 12.

Claims 13-15 and 18 have been rejected under 35 USC § 103 (a) as being unpatentable over the Jabr patent in view of the Piehler et al patent or the Franck et al patent and further in view of Sieben US Patent No. 5,880,870 ("the Sieben et al patent"). Claim 15 has been cancelled. Claim 13 has been amended in a similar manner as claim 12. Claims 14 and 18 are dependent upon claim 13. For the reasons the reasons set forth above, and the reasons set forth below, the Applicant respectfully requests that the Examiner reconsider and withdraw this rejection. The Sieben et al patent relates to an optical modulator which, unlike the invention, is configured to receive a single optical carrier at a single wavelength. The Sieben et al patent also does not disclose a biasing scheme as recited in the claims at issue. For all of the above reasons and the reasons below, the Examiner is respectfully requested to reconsider and withdraw the rejection of these claims.

Claims 19-21 have been rejected under 35 USC § 103 (a) as being unpatentable over the Jabr patent in view of the Piehler et al patent or the Franck et al patent and in view of "the Sieben et al. patent and further in view of Webb US Patent No. 6,163, 394 ("the Webb patent"). Claims 19-21 are dependent upon claim 13. For all of the reasons above and the reasons set forth below, the Examiner is respectfully requested to reconsider and withdraw the rejection of these claims. The Webb patent also discloses an optical carrier configured for a single wavelength carrier signal. It does not otherwise disclose or suggest a biasing system as recited in the claims at issue. For these reasons and the reasons below, the Examiner is respectfully requested to reconsider and withdraw the rejection. It is respectfully submitted that the Examiner has failed set forth a *prima facie* case of obviousness for the rejection of claim 12; the rejection of claims 13-15 and 18; and the rejection of claims 19-21. In particular, each rejection is based on the combination of 3 to 4 references. It is elementary that it is impermissible for the Examiner to

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reject the claims on a piecemeal basis using the claims as a blueprint. In order to establish a *prima facie* case of obviousness, three criteria must be met as set forth in MPEP § 2143.

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination reasonable expectation of success must both be found in the prior art, not in the Applicant's disclosure."


The Examiner has failed to show that there was any motivation to combine the references in the manner suggested. Not only is there no motivation but the references teach away from combination with each other. In particular, the Jabr reference discloses an optical system including an optical modulator that receives a carrier signal having two wavelengths. As discussed above, the other references relate to optical modulators with a single wavelength optical carrier. As such, it is also respectfully submitted that the Examiner has failed to show a reasonable expectation of success of the combined references. For, all of the above reasons, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims.

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Respectfully submitted,

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